

In another part of this JOURNAL we publish the very excellent set of record blanks devised by Dr.

THE EXCEPTIONAL CHILD.

Grossmann for investigating the physical and mental potentialities of children. Dr. Grossmann in an address to the San Francisco County Medical Society made evident the great importance of a better understanding of child development, and claimed that 25% of our children depart from the normal. The figure may at first sight appear excessive, but a little consideration will show that the progress of the race under present conditions, at the existing rate of change, must inevitably be accompanied by increasing abnormality in the young. It is to be remembered that it is a salutary biological law that animals or plants subjected to rapid and profound change of environment, respond by increased variation in the offspring. Notwithstanding the doctrine of the fixity of the germ plasm that now holds sway, the fact must be allowed that the racial intermixture following facility of travel, the profound changes in the relation of physical to mental work, and the many nutritional changes that accompany the increasing substitution of urban for rural life, cannot be without indirect influence on the germ cells, resulting in increased variation. In fact, such variation is a prerequisite for progress. Without variants permitting of higher cultivation, whose capacities can be transmitted, we could have little hope of increasing or even maintaining the present advance. The fundamental importance of this fact is little appreciated by the profession and not at all by the public. Civilization means variation, but variation occurs in all directions. Some of the variants, probably the smaller number, possess an increased potentiality—they have the capacity to do more or better than their forebears. Others are reversions to a more primitive type. The greater number are neither atavistic nor progressive, but simply unbalanced, exhibiting plus and minus capacities in the same individual. If we were applying the nomenclature of pathology to these groups, we might designate them as hyper-hypo and para-potential. As Dr. Grossmann well pointed out, to the legislator and most educators all these variant children are thought of and generally treated as alike. To our fathers they were simply unusual children, to be duly licked back to the normal. While to-day the stick has disappeared, the purpose has remained unchanged, we still strive to shape them back to the average. But obviously such effort is either futile or wrong. The hypo-potential are hopeless and a danger to the race—a more enlightened age will deal with them in ways that it is useless to discuss at present. The hyper-potential should be society's darlings, for with them lies the future. At present a few ultimately so become, the majority never realize or have a chance of realizing their potentialities. The para-potential

are a mighty problem. Contributing a very serious proportion of the growing population, with capacities unevenly distributed, they are the source of the sentimental criminal, the clever fool and the whole realm of paradoxical humanity. To make these one-sided, unbalanced children fit, as men and women, into the framework of society, so that they and their environment both benefit, is of social problems one of the most important. Let us remember that it is from the activities of this class that most of the discords of social life arise. In family life, as in social activities, it is the unbalanced mind that breeds unhappiness and strife. The greatest educational problem of to-day is to devise means of recognizing the abnormal in the growing child, and then so train him that the variant qualities having social value be developed and harmful qualities brought within control. In the attainment of this ideal to which Dr. Grossmann has so long and earnestly worked the first step is a correct diagnosis of the individual child. Believing that the tables drawn up by Dr. Grossmann are a valuable aid to such diagnosis, we have reprinted them for the benefit of our readers.

H. D'ARCY POWER.

In the performance of our ordinary surgical operations the possible sources of contamination are the hands of the surgeon, the **DISINFECTION OF THE SKIN.** materials used (instruments, ligatures and sutures, dressings, etc.) and the skin of the patient.

By the employment of reasonable care, rubber gloves, gowns and masks, and the usual methods in vogue for the sterilization of our instruments, ligatures and dressings, the surgeon and his materials are rendered reasonably safe. The skin of the patient alone remains.

The carbolic spray of Lister and the solution of the same substance rapidly gave way to bichlorid of mercury, at whose shrine we have worshiped for the past two decades, knowing, however, that it did not fulfil the conditions required: inhibition of bacterial growth, penetration into the skin, harmlessness to the patient.

In 1908 Grossisch (Zentralblatt f. Chir. 1908, No. 44, p. 1289) announced that simple painting of the skin with tincture of iodine *without previous preparation whatsoever* fulfilled all our conditions. His method was rapidly adopted for trial with almost universal approbation. Numerous cases, however, were reported of severe eczemas, especially in patients upon which closed dressings such as plaster of Paris casts were used. It was found that this objection could be obviated by the use of freshly prepared tincture of iodine, as in the older preparations there is present hydriodic acid, a substance extremely irritating to the skin; and at the conclusion of the operation washing the superfluous tincture of iodine away with alcohol or thiosulphate of soda.

Numerous experiments, which have been carefully reviewed by Lenormant (Presse Medicale 1911, No. 38, p. 391), seem to indicate fairly con-

clusively that the iodine penetrates the epidermis and is found in the superficial layers of the derma, this penetration being much less marked when the skin has been previously moistened by the application of water. Seelig and Gould (Surg. Gyn. & Obstet. 1911, vol. 12, p. 262), in a most ingeniously devised series of experiments, using a flap of living skin of the rabbit's abdomen, confirm the opinion of Grossisch. They were able to show that the tincture of iodine penetrates more rapidly than alcohol in direct proportion to the iodine content, and that the higher strength alcohols were more efficient than those of lower strength.

All experimenters agree that the iodine exerts but an inhibitive action upon bacterial life, cultures invariably being positive after the removal of the iodine with thiosulphate of soda.

In the Congress of the German Surgical Society of this year (Zentralblatt f. Chir. 1911, No. 29, supp. p. 1, et seq.) Küttner, who interviewed 187 surgeons, reports that those using the method without previous preparation of the patient, are universally in favor of the method. Of 113 operators who used tincture of iodine after first scrubbing the patient with other substances, 78% report cases of eczema; of 74 operators who used tincture of iodine with no previous preparation of the patient, but 8% complained of having had cases of eczema. Küttner sums up the advantages of the method as follows: The procedure is (1) without special preparation available even under unfavorable external conditions, (2) can be carried on in a few seconds, (3) is effective in a few minutes, (4) can be used in every variety of wound and operation, (5) its efficiency is absolutely sure, (6) the technic is so simple that even unschooled and but superficially instructed personnel may be trusted to carry it out, (7) it is humane. He further states that in his opinion it is the only method of disinfection of the operative field.

The technic is as follows: if the patient be in hospital the evening before the operation he may have a full bath without special attention being paid to the operative field. The field is shaved (soap and water) but no local dressings are applied. On the day of the operation, after narcosis has been commenced, the field of operation is painted with freshly prepared 5% tincture of iodine (half strength U. S. P. is effective). Immediately before the beginning of the operation the field is again painted with the same solution. For emergency operations dry shaving, painting of the field with 5% tincture of iodine, *without any sort of previous preparation*.

Although nearly all observers are lavish in their praises of the method, here and there we meet with the opinion of men perfectly competent to judge in these matters who believe they have proved the method to be totally inefficient. Tinker and Prince (Surg. Gyn. & Obstet. 1911, vol. 12, p. 530) detail a series of experiments upon human skin infected with bacillus subtilis in which the tincture of iodine according to the method of Grossisch was inert.

Although, no doubt, good results are obtained by any of the current methods now in vogue, the Grossisch technic is the method par excellence for

the field, the mine and the lumber camp, and bids fair to replace the long and tedious methods heretofore employed, their efficiency being proportioned to the care with which they are carried out.

S. H.

Medicine is making great strides and every year finds new methods of diagnostic precision. It is becoming imperative and more necessary for the general practitioner to have a reasonable working knowledge of these newer methods and to be conversant with the instruments. While he cannot hope to become expert in the use of those procedures used only in a limited number of cases he should perfect himself in utilizing appliances that will be found helpful daily.

OPHTHALMOSCOPY IN MEDICINE.

It is now sixty years since Helmholtz invented the ophthalmoscope and what a small minority of medical men can examine the ocular fundus. Its use is practically confined to a few diagnosticians, neurologists and men specializing in ophthalmology. This positively spells of medievalism and is no credit to the profession. Think of it gentlemen, sixty years since a most useful and very inexpensive instrument has been perfected and but a minority of you make use of it.

Within the past decade the electric ophthalmoscope has been made practicable, so much so, that one can learn to see the fundus with little practice and carefully study the interior of the eyeball. Nowhere else in the system can one see blood coursing through the vessels, both arteries and veins, examine their coats and have under inspection a nerve trunk coming directly from the cranium, a piece of the brain, as it were, pushed under your eye.

A five per cent. solution of euphthalmine instilled once or twice into the eye will cause a dilation of the pupil, furthering the ease of examination, without the fear of raising the tension and causing glaucoma.

Other mydriatics should not be used before the fundus has been examined as they raise tension and occasionally may be followed by an attack of acute glaucoma.

Numerous diseases of the central nervous system produce changes within the eye and often a beginning optic nerve atrophy is the first sign of incipient spinal sclerosis. The circulatory system also shows here with hyperaemias, anaemias, hemorrhages and changes within the walls of the vessels, etc. Diabetes and nephritis are often first suspected after using the ophthalmoscope.

Syphilis, either when inherited or acquired at times manifests itself here as does miliary tuberculosis.

To epitomize: The ophthalmoscope is now a handy, inexpensive, simple and useful instrument which should be used as a measure of routine examination in internal medicine and the general practitioner has not fully protected his patient if not utilizing this simple and useful aid in diagnosis.

W. S. F.